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EXAMINER	
BOWMAN, MARY ELLEN	
ART UNIT	**PAPER NUMBER**
2879	

NOTIFICATION DATE	DELIVERY MODE
01/16/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/583,383	TOMAI ET AL.	
	Examiner	Art Unit	
	MARY ELLEN BOWMAN	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/28/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed October 20, 2008 have been fully considered but they are not persuasive. Regarding claims 1-4 and 19, Applicant's arguments are not persuasive because the anode protection layer from the cited prior art is a conductive material formed directly on the anode, and it is therefore the position of the Examiner that said layer is part of a multilayer anode, which is well known in the art. Regarding claims 11-18, Applicant's arguments are unpersuasive for several reasons. First, the Onikubo reference is used as a 102 reference, and therefore is not required to teach the desirability of its constituent parts, it merely must anticipate the claimed invention, which it does. Secondly, contrary to Applicant's assertion, claims 11 and 12 have not been amended to overcome the disclosure of said reference (see rejection set forth below). Finally, regarding claims 5-10, Applicant's arguments are not persuasive because, contrary to Applicant's assertions, Tokailin does teach a multilayer conductive body and does teach the desirability of the SB and SA measurements regarding display device performance. Therefore, in light of the above, as well as the rejection set forth below, Examiner's rejection is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Tokailin et al., USPN 6,828,045 B1, filed on 13 June 2003 (hereinafter referred to as "Tokailin").

Regarding claim 1, Tokailin teaches **an organic electroluminescent device comprising: a cathode** (e.g., col 1, lines 15-16) **an anode** (e.g., col 1, lines 15-16) **and an emitting layer interposed between the cathode and the anode** (e.g., col 1, lines 15-16) **the anode** (e.g., col 4, lines 27-31; "forming an anode on a substrate, forming an inorganic compound layer to the surface of the anode [i.e., the anode is a multilayer structure including the surface protection layer]") **comprising at least one element selected from the group consisting essentially of lanthanum (La), cerium (Ce), neodymium (Nd), samarium (Sm), and europium (Eu), and at least one element selected from the consisting essentially of chromium (Cr), tungsten (W), tantalum (Ta), niobium (Nb), silver (Ag), palladium (Pd), copper (Cu), nickel (Ni), cobalt (Co), molybdenum (Mo), platinum (Pt), and silicon (Si)** (e.g., col 9, lines 42-47; "materials for the surface protection film include inorganic compounds…which contain one or two or more atoms selected from…Cu…Nb, Ta…Cr, W…Co…Eu, Ce, La…[and] Sm").

Regarding claim 2, Tokailin teaches the invention as explained above regarding claim 1, and further teaches **the total concentration of the at least one element selected from the group consisting of lanthanum (La), cerium (Ce), neodymium (Nd), samarium (Sm), and europium (Eu) is 0.1 to 50 wt%** (e.g., col 10, line 1; "CeSnO4"; Note: The aforementioned compound is listed as an example of the protection film 36 covering anode layer 38, and using

the atomic mass of the elements, the wt% of Ce is found to be 43.4 wt%, which is within the claimed range.).

Regarding claim 3, Tokailin teaches the invention as explained above regarding claim 1, and further teaches **the anode comprises cerium** (e.g., col 3, lines 37-39; "the inorganic compound forming the surface protection film [i.e., part of the multilayer anode] is preferably an oxide containing a Ce atom").

Regarding claim 4, Tokailin teaches the invention as explained above regarding claim 1, and further teaches **the anode has a work function of 5.0 eV or more** (e.g., col 18, lines 20-22; "the work function of the surface of the IZO/CeO_2 film…was 6.12 eV").

Regarding claim 19, Tokailin teaches **a display** (e.g., col 4, lines 18-21; "the organic EL element can be provided suitable for portable information display devices") **comprising the organic electroluminescent device as taught regarding claim 1 above.**

Claims 11,13, 14, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Onikubo et al., JP 09-097676, published 08 April 1997 (hereinafter referred to as "Onikubo"). The above listed reference was cited in Applicant's Information Disclosure Statement and the full English translation has been attached to this Office Action. The English translation will be used for citation purposes throughout this Action.

Regarding claim 11, Onikubo teaches **an electroluminescent device** (e.g., [0001]; "organic electroluminescence (EL) element used for the source of the flat light, or a display") **comprising an anode layer, an organic emitting layer, and a cathode layer in sequential order** (e.g., [0002]; "EL consists of a pair of opposite electrodes which sandwiched the luminous layer...an electron is poured in from the negative pole side [the cathode] and, as for the

luminescence, an electron hole is poured in from the anode side"**), the cathode layer comprising at least a first metal** (e.g., [0010]; "metallic elements (B)") **and a second metal** (e.g., [0010]; "metallic elements (C)"), **the standard oxidation-reduction potential (E(A)) of the first metal at 25°C being -1.7 (V) or more** (e.g., [0010]; "as for metallic elements (B) which are 4.0 eV or more of work functions, there are varieties…Ag [0.7996]…Cu [0.34]…Co [-0.28]…Au [1.83]…nickel [-0.25]…Pd [0.915]...Pt [1.188]...[and] aluminum [-1.66]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than -1.7.)**, and the standard oxidation-reduction potential (E(B)) of the second metal at 25°C satisfying the following expression: E(A) - 1.1 ≤ E(B)** (e.g., [0006]; "metallic elements (C) which are...V [-1.13]...Bi [0.5]...[and] Sn [-0.13]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than E(A) – 1.1.), **wherein the first metal is a metal selected from the group consisting of Al, Cr, Ta, Zn, Fe, Ti, In, Co, Ni, Ge, Cu, Re, Ru, Ag, Pd, Pt, and Au** (e.g., [0010]; "as for metallic elements (B) [the first metal] which are 4.0 eV or more of work functions, there are varieties…Ag [0.7996]…Cu [0.34]…Co [-0.28]…Au [1.83]…nickel [-0.25]…Pd [0.915]...Pt [1.188]...[and] aluminum [-1.66]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than -1.7.)**, and the second metal is a metal selected from the group consisting of Te, Sn, V, Mo, Nb, and Zr** (e.g., [0006]; "metallic elements (C) [the second metal] which are...V [-1.13]...[and] Sn [-0.13]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than E(A) – 1.1.)**.**

Regarding claim 13, Onikubo teaches the invention as explained above regarding claim 11, and further teaches **the majority component of the cathode layer is the first metal** (e.g., Table 1 below, samples 7, 8-10 and 12 have metallic element (B) [i.e., the first metal] as the majority component).

実施例	合金組成および比率 A : B : C	５Ｖでの初期輝度 (cd／m²)	５００時間後の輝度 (初期１００cd／m²)
2	Mg Al Mn		
	10 : 1 : 1	200	70
3	Mg Ag Zn		
	9 : 1 : 2	250	60
4	Mg Ag In		
	17 : 1 : 2	280	65
5	Li Al Mg		
	3 : 1 : 6	310	80
6	Li Al In		
	4 : 2 : 4	320	55
7	Li In Zn		
	1 : 6 : 3	300	60
8	Sm Al Mn		
	4 : 5 : 1	270	55
9	Li Al Cr		
	2 : 90 : 8	210	75
10	Li In Sn		
	1 : 80 : 19	180	80
11	Yb Al Zn		
	5 : 2 : 3	290	70
12	Li Sb La		
	15 : 50 : 35	210	85

Regarding claim 14, Onikubo teaches the invention as explained above regarding claim 11, and further teaches **the first metal is a metal selected from the group consisting of Ni, Ge, Cu, Re, Ru, Ag, Pd, Pt, and Au** (e.g., [0010]; "as for metallic elements (B) [the first metal] which are 4.0 eV or more of work functions, there are varieties…Ag [0.7996]…Cu [0.34]…Co [-0.28]…Au [1.83]…nickel [-0.25]…Pd [0.915]...Pt [1.188]...[and] aluminum [-1.66]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than -1.7.).

Regarding claim 16, Onikubo teaches the invention as explained above regarding claim 11, and further teaches **the cathode layer contains 0.1 wt% to 5.0 wt% of an alkali metal or an alkaline earth metal** (e.g., Table 1 above, compound 9 has 0.4 wt% of Li, based on well known calculations using the atomic mass of the three elements and the molar ratio listed in the table).

Regarding claim 18, Onikubo teaches the invention as explained above regarding claim 11, and further teaches **the first metal is Ag** (e.g., [0010]; "as for metallic elements (B) [the first metal] which are 4.0 eV or more of work functions, there are varieties…Ag").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onikubo in view of Ito et al., USPN 5,652,067, published July 29, 1997 (hereinafter referred to as "Ito").

Regarding claim 15, Onikubo teaches the invention as explained above regarding claim 11, and further teaches the second metal is a metal selected from the group including Sn (e.g., [0006]; "metallic elements (C) [the second metal] which are...V [-1.13]...Bi [0.5]...[and] Sn [-0.13]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than E(A) – 1.1.). However, Onikubo fails to teach the metal may be Zr.

In the same field of endeavor of organic electroluminescent displays, Ito teaches **the second metal is a metal selected from the group consisting of Mo, Nd, Nb, and Zr** (col 18, lines 45-49; "the cathode…formed of…Sn…and Zr or alloys of two or more of these"). Ito teaches that Sn and Zr are equivalent materials and may serve the same purpose as a cathode in an organic electroluminescent display device (col 18, lines 45-49).

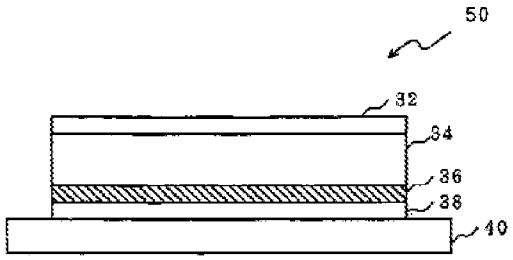
It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Zr as the second metal as opposed to Sn, as taught by Onikubo, because Zr and Sn are well known equivalent materials that can be used interchangeably in a cathode.

Claims 5-10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokailin.

Regarding claims 5 and 20, Tokailin teaches **a display** (col 2, lines 37-41) **comprising: a conductive multilayer body comprising: an insulative transparent substrate** (e.g., col 5, lines 57-61; "a substrate 40 is preferably made of a transparent rigid material…includ[ing] glass") **and a transparent conductive film formed on the transparent substrate** (e.g., col 5, lines 66-67 and col 9, lines 33-34; "an anode 38 [and] a surface protection film 36"; see Figure 2 below, anode 38 and protection film 36 are formed on substrate 40), **the transparent conductive film comprising an oxide containing at least cerium (Ce)** (e.g., col 10, lines 22-24; "oxides containing a Ce atom are preferred since more dense surface protection film can be obtained"), **wherein, in a graph showing binding energy of an electron present in a cerium 3d orbital on the surface of the transparent conductive film measured by X-ray photoelectron spectroscopy, when SA represents the total peak area of the binding energy between 877 eV and 922 eV, and SB represents the total peak area of the binding energy between 914 eV**

and 920 eV, SB/SA which represents an area ratio of SB to SA satisfies the following expression: SB/SA < 0.13 (e.g., col 7, lines 49-57; "SA is the area of a peak A that is an oxygen 1s spectral peak at the binding energy of 530 ± 0.5 eV, and SB is the area of a peak B that is an oxygen 1s spectral peak at the binding energy of 532 ± 1.0 eV…the area ratio SB/SA is preferably 0.2 or less, more preferably 0.1 or less"), **and wherein the transparent conductive film further comprises at least one metal element selected from the group consisting of indium (In) and tin (Sn)** (e.g., col 7, lines 13-14; "the ITO with the CeO_2 film").

Fig. 2



It would have been obvious to one of ordinary skill in the art at the time the invention was made to measure an area ratio between SB and SA of less than 0.1 based on the teaching of Tokailin that the area ratio of the oxygen 1s spectral peaks should be less than 0.1, because the above listed area ratio measures surface impurities, which allows for proper removal of said impurities and better adhesion between the anode and the electroluminescent layer. The binding energy at which the peaks are measured changes with the type of atom, as well as the energy level of the electron, therefore it would have been obvious to utilize the above referenced ratio to a measurement of 3d cerium peaks at the appropriate binding energies for cerium and for the 3d orbital.

Regarding claim 6, Tokailin teaches the invention as explained above regarding claim 5, and further teaches **the transparent conductive film** (e.g., anode 38 and surface protection film 36) **further comprises gallium** (Ga) (e.g., col 9, lines 42-46; "materials for the surface protection film include…Ga").

Regarding claim 7, Tokailin teaches **a method of producing the conductive body as taught regarding claim 5, comprising: forming the transparent conductive film** (e.g., anode 38 and surface protection layer 36) **by sputtering at a partial pressure of oxygen of 0.1 Pa or less in a sputtering atmosphere** (e.g., col 5, lines 30-31; "flow amount of sputtering gas [is] oxygen partial pressure" and col 12, lines 30-31; "sputtering gas pressure is preferably from 0.01 Pa to 3 Pa").

Regarding claim 8, Tokailin teaches **an electrode substrate for an organic electroluminescent device comprising: the conductive body as explained above regarding claim 5, and a metal conductor formed on the conductive multilayer body** (e.g., col 8, lines 37-38; "a cathode 32"), **the transparent conductive film** (e.g., anode 38 and surface protection film 36) **arranged such that it is capable of driving an organic electroluminescent layer** (e.g., col 17, lines 54-64; "substrate was prepared…organic EL element was formed…when a direct current of 6 V was applied to the organic EL element [including the substrate and the anode 38 and the surface protection film 36]…blue emission of 266 nit brightness was observed").

Regarding claim 9, Tokailin teaches **an organic electroluminescent device** (col 2, lines 37-41; "organic EL element…[can be used for] display devices") **comprising the electrode substrate as taught regarding claim 8 above, and an organic electroluminescent layer**

formed on the electrode substrate (e.g., col 10, lines 44-45; "transparent electrode (anode)/surface protection film/emitting layer [organic electroluminescent layer]/cathode").

Regarding claim 10, Tokailin teaches an organic electroluminescent device comprising the conductive body as taught regarding claim 5 above, **and an organic electroluminescent layer formed on the conductive multilayer body** (e.g., col 10, lines 44-45; "transparent electrode (anode)/surface protection film/emitting layer [organic electroluminescent layer]/cathode").

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onikubo in view of McNulty et al., USP App. Pub. No. 2003/0111955 A1, published 19 June 2003 (hereinafter referred to as "McNulty").

Onikubo teaches **an electroluminescent device** (e.g., [0001]; "organic electroluminescence (EL) element used for the source of the flat light, or a display") **comprising an anode layer, an organic emitting layer, a cathode layer, and a conductive layer in sequential order** (e.g., [0002]; "EL consists of a pair of opposite electrodes which sandwiched the luminous layer...an electron is poured in from the negative pole side [the cathode] and, as for the luminescence, an electron hole is poured in from the anode side"; [0024]; "the negative pole [the cathode] may be constituted by the metal or alloy of two or more layers if needed"), **the cathode layer comprising at least a first metal** (e.g., [0010]; "metallic elements (B)") **and a second metal** (e.g., [0010]; "metallic elements (C)"), **the standard oxidation-reduction potential (E(A)) of the first metal at 25˚C being -1.7 (V) or more** (e.g., [0010]; "as for metallic elements (B) which are 4.0 eV or more of work functions, there are varieties…Ag [0.7996]…Cu [0.34]…Co [-0.28]…Au [1.83]…nickel [-0.25]…Pd [0.915]...Pt [1.188]...[and]

aluminum [-1.66]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than -1.7.)**, and the standard oxidation-reduction potential (E(B)) of the second metal at 25°C satisfying the following expression: E(A) - 1.1 ≤ E(B)** (e.g., [0006]; "metallic elements (C) which are...V [-1.13]...Bi [0.5]...[and] Sn [-0.13]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than E(A) – 1.1.), **wherein the first metal is a metal selected from the group consisting of Al, Cr, Ta, Zn, Fe, Ti, In, Co, Ni, Ge, Cu, Re, Ru, Ag, Pd, Pt, and Au** (e.g., [0010]; "as for metallic elements (B) [the first metal] which are 4.0 eV or more of work functions, there are varieties…Ag [0.7996]…Cu [0.34]…Co [-0.28]…Au [1.83]…nickel [-0.25]…Pd [0.915]...Pt [1.188]...[and] aluminum [-1.66]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than -1.7.)**, and the second metal is a metal selected from the group consisting of Te, Sn, V, Mo, Nb, and Zr** (e.g., [0006]; "metallic elements (C) [the second metal] which are...V [-1.13]...[and] Sn [-0.13]"; Note: The well known standard oxidation reduction potential of the above listed metals is written beside each metal, and each potential is greater than E(A) – 1.1.)**.** Onikubo fails to teach the layer on the cathode is transparent.

McNulty, in the same field of endeavor of electroluminescent displays, teaches **the layer on the cathode layer is transparent** (e.g., [0025]; "protective layer 100 can comprise a substantially transparent polymer"; see Figure 1 below, protective layer 100 is disposed on cathode 22).

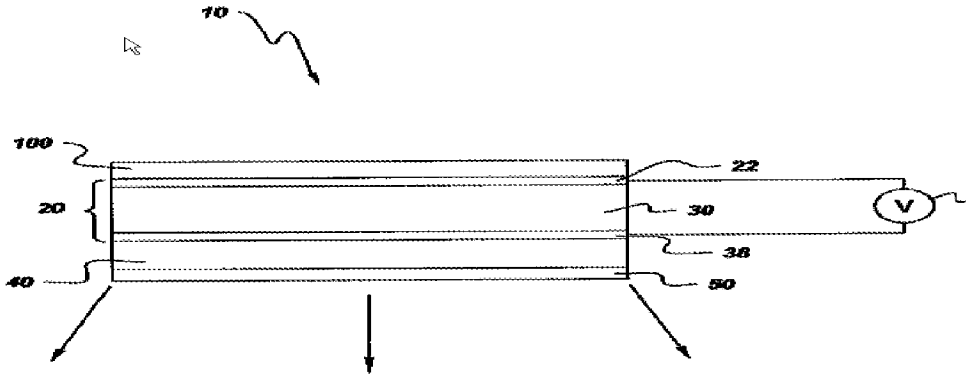


Fig. 1

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the protective layer above the cathode out of a transparent material based on the teachings of Onikubo and McNulty, because utilizing a transparent material (as in McNulty) would allow the final display apparatus to be either a top or bottom or double-sided display, which would increase the commercial applications of the final product.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onikubo in view of Hosokawa et al., USPN 6,534,199 B1, published 18 March 2003 (hereinafter referred to as "Hosokawa").

Regarding claim 17, Onikubo teaches the invention as explained above regarding claim 11, but fails to teach the optical transparency of the cathode layer.

Hosokawa, in the same field of endeavor of electroluminescent displays, teaches **the cathode layer has an optical transparency at a wavelength of 380 nm to 780 nm** (e.g., col 26, lines 16-17; "the visible region of 400 to 700 nm") **of 10% or more** (e.g., col 26, lines 58-60; "it is preferable that the cathode has a transmittance of the emitted light greater than 10 %").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a transparent cathode layer as taught by the prior art reference to modify the teaching of Onikubo, because a transparent cathode layer would allow the final display apparatus to be either a top or bottom or double-sided display, which would increase the commercial applications of the final product.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARY ELLEN BOWMAN whose telephone number is (571) 270-5383. The examiner can normally be reached on Monday-Thursday, 7:30 a.m.-6:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. B./
Examiner, Art Unit 2879

/NIMESHKUMAR D. PATEL/
Supervisory Patent Examiner, Art Unit 2879